

REMARKS

In the Office Action, dated February 6, 2003, the Examiner states that Claims 1-6 are pending and Claims 1-6 are rejected. By the present Amendment, Applicant amends the claims and the abstract.

In the Office Action, the abstract is objected to for exceeding more than 150 words. The Applicant has amended the abstract to overcome this objection.

In the Office Action, Claims 1-6 are rejected under 35 U.S.C. §102(b) as anticipated by Plummer (US 3,872,749). The Applicant respectfully disagrees with and traverses this rejection.

The working method defined in Claim 1 includes the technical features that:

*In the cutting tool, one piece of edge line continuing to a blade end is constructed as a cutting edge;*

*The blade end has formed therein a notched portion which connects the one piece of edge line and another piece of edge line; and*

*While a relative rotating movement around a center line of the die is being made between the cutting tool and the original die plate, the cutting tool goes on to be fed into the original die plate with the cutting edge being used as a leading blade so that the wall surface corresponding to the non-lens surface of the Fresnel molding groove is gradually cut from an upper end thereof by the notched portion.*

According to the working method including the above claimed features, the wall surface of the die, which corresponds to the non-lens surface, is cut by utilizing the notched portion. Therefore, the mechanical strength of the blade end increases with the result that the frequency at which the tip of the cutting tool gets chipped off decreases. Also, it is thereby possible to prolong the service life of the cutting tool. Since the wall surface of the Fresnel molding

groove is cut by the notched portion, it is possible to control the configuration properties such as the surface roughness, of that wall surface in conformity with the configuration of the notched portion. For example, it is possible to form by the notched portion a concavities/convexities configuration of cutting trace in the wall surface corresponding to the non-lens surface. In this case, a concavities/convexities portion resulting from the cutting trace is transferred to the non-lens surface of the Fresnel lens, with the result that the surface roughness of that non-lens surface becomes increased. Resultantly, the non-lens surface is constructed as a frosted-glass configuration of mat surface. Thus, the emission of stray light within the lens from the non-lens surface is suppressed with the result that the contrast is improved.

Contrary thereto, Plummer discloses a method for working master dies for molding Fresnel optics. However, Plummer fails to disclose the working method having the above technical features of the present invention defined in Claim 1. Namely, Plummer discloses the detail of the working method in column 9, lines 15-56, and states that "He rotates the hand wheel 72 until it reaches the setting indicated by the tabulation. The cutting tool 20 thereby rules an echelon with the proper depth. After allowing the work piece 16 to rotate several times with the cutting tool 20 at the final depth to clean up the echelon and provide it with a smooth facet, he raises the cutting tool 20 to clear the work piece 16." Also, the cutting tool 20 is capable of being moved in the lateral direction in FIG. 1 and in the direction normal to the surface of the paper in FIG. 2 to thereby change the cut position on the work piece 16 in its radial direction.

In view of these points, it is understood that the cutting tool of Plummer is configured as shown in the attached drawing. That is, the cutting tool has two edge lines as cutting edges merging with each other at the blade end, or the tip of the tool, and the wall surface corresponding to a lens surface is cut by the one edge line, while the other wall surface corresponding to a non-lens surface is cut by the other edge line. Accordingly, it is apparent that Plummer fails to disclose the working method of cutting the wall surface corresponding to the

non-lens surface by the notched portion of the cutting tool provided between the two edge lines thereof. Therefore, the working method of Claim 1, nor any of the other claims as discussed below, is not anticipated by Plummer.

In the Office Action, Claims 1-6 are rejected under 35 U.S.C. §102 (b) as anticipated by Meyers et al. (US 5,638,212). The Applicant respectfully disagrees with and traverses this rejection.

Meyers et al. discloses in FIG. 21 a cutting tool having an edge line and a notched portion on its blade end. However, Meyers et al. is silent with respect to the way the wall surfaces of the die are cut, which correspond to a lens surface and a non-lens surface of the Fresnel lens, respectively. In particular, Meyers et al. fails to disclose the method of cutting the wall surface corresponding to the non-lens surface by the notched portion of the cutting tool. In FIG. 21 of Meyers et al., there is illustrated a cutting tool having both edge lines and a notched portion, but these edge lines and the notched portion are apart from the wall surfaces of the work piece, and there are no explanations of how to move the cutting tool to cut the grooves illustrated in FIG. 21. Accordingly, the working method of Claim 1, and the other claims as discussed below, is not anticipated by Meyers et al.

With respect to Claim 2, it is apparent that Plummer fails to disclose the concavities/convexities configuration of cutting trace is formed on the wall surface by the notched surface.

With respect to Claim 3, both Plummer and Meyers et al. fail to disclose the cutting tool having a notched portion to cut the wall surface corresponds to a non-lens surface of the Fresnel lens.

With respect to Claims 4 and 5, these claims define the die worked by the method including the technical features of Claim 1, so that the die defined in each of Claims 4 and 5 is not anticipated by Plummer or Meyers et al.

With respect to Claim 6, since both Plummer and Meyers et al. fail to disclose the working method of cutting the wall surface of the die corresponding to the non-lens surface by the notched portion to form the

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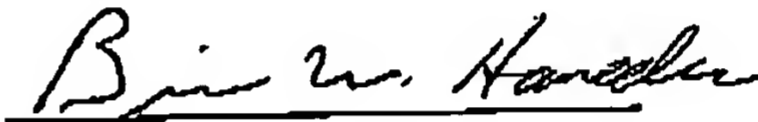
concavities/convexities portion thereon, a Fresnel lens as defined in Claim 6 is not anticipated by either Plummer or Meyers et al.

In light of the foregoing response, all the outstanding objections and rejections have been overcome. Applicant respectfully submits that this application should now be in better condition for allowance and respectfully requests favorable consideration.

Respectfully submitted,

August 5, 2003

Date



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